



STEVEN L. BESHEAR
GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601
www.kentucky.gov

LEONARD K. PETERS
SECRETARY

FACT SHEET

KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE COMMONWEALTH

KPDES No.: KYG640000 Permit Writer: Ronnie Thompson Date: December 22, 2009
AI No.: 35050

1. SYNOPSIS

a. Introduction

The Kentucky Division of Water is renewing the Kentucky Pollutant Discharge Elimination System (KPDES) general permit that authorizes the discharge of pollutants in filter backwash water and other wastewaters associated with drinking water production from municipal, private, state and federal Water Treatment Plants (WTPs). WTPs fall under the Standard Industrial Classification Code (SIC Code) 4941 - Water Supply Systems, except irrigation.

This general permit, referred to as KYG64, will replace all previous versions of KYG64 issued by the Division of Water. The conditions and requirements contained herein shall supersede the conditions and requirements contained in all previous versions of this permit.

This general permit contains numerous changes to the previous permit. The most significant changes from the September 2004 version of KYG64 include:

1. An exclusion of eligibility for discharges to a Cold Water Aquatic Habitat or within five miles and upstream of an existing drinking water intake.
2. An exclusion of eligibility for discharges to a water impaired for turbidity, or impaired for sedimentation/siltation with an approved Total Maximum Daily Load.
3. An exclusion of eligibility for WTPs that do not use conventional treatment.
4. The addition of effluent limitations for Total Residual Chlorine and conditional effluent limitations for Total Recoverable Iron and Total Phosphorus.
5. The addition of conditional effluent monitoring for Total Recoverable Aluminum.

6. Additional requirements to address antidegradation concerns for new facilities or expanded facilities discharging to a High Quality water.
7. The addition of a requirement for the permittee to develop and implement a Best Management Practices plan.
8. A requirement to identify discharge locations by placement of an informational marker.
9. The addition of definitions of some of the terms used in this general permit.
10. The addition of a provision to address significant process changes.

b. Description of Operation

WTPs treat surface or ground water to provide finished drinking water to consumers. Treatment of intake water may include screening, pre-sedimentation, flocculation, sedimentation, filtration, clarification and disinfection.

Wastewater is produced when water filters are periodically backwashed with finished drinking water to remove collected material. Backwashing is necessary in order to prevent the filters from clogging which would result in reduced filtering capacity and poor efficiency. Other wastewater generated by WTPs may include clarifier or sedimentation basin wastewater and wash water.

c. Production Capacity

WTP capacity varies from small private plants to large municipal plants producing millions of gallons of finished drinking water per day. Generally, the amount of wastewater produced is directly proportional to the production rate of the plant. Typically, WTPs do not operate at full production capacity.

d. Description of Treatment

Treatment of produced wastewater varies depending on the capacity of the WTP, the raw water source, geography and other site-specific conditions. The most common form of wastewater treatment is sedimentation. In this case, wastewater is directed to basins or holding ponds designed to allow sufficient detention time for suspended material to settle out before discharge. Sedimentation also allows time for chlorine, which is present in finished drinking water, to dissipate.

Any type of treatment produces sludge, which is typically dried and sent to a landfill or land applied. Some WTPs may also recycle a portion of their wastewater.

WTP discharges may occur on an intermittent basis or as is sometimes the case with treatment lagoon overflows, on a continual basis.

e. Selected Definitions

Cold Water Aquatic Habitat means a surface water and associated substrate that are able to support indigenous aquatic life or self-sustaining or reproducing trout populations on a year-round basis.

Conventional Treatment means raw water treatment consisting of coagulation, flocculation, sedimentation, gravity filtration and disinfection.

Daily Maximum is the highest of the discharge values measured on any one day during a calendar month. When only one sample is taken during a calendar month, the daily maximum is equivalent to the monthly average.

Exceptional Water is generally a unique water of the Commonwealth. The term may include waters that contain a fish community that is rated as "excellent" by the Index of Biotic Integrity; waters that contain a macroinvertebrate community that is rated as "excellent" by the Macroinvertebrate Bioassessment Index; or waters that are in the Cabinet's reference reach network. The term automatically includes those waters identified as an Outstanding State Resource Water.

Existing Facilities are facilities that are already discharging on the effective date of this permit.

Expanded Facilities are facilities that increase pollutant loading to the stream or increase their design capacity over levels approved prior to the effective date of this general permit.

Facility means an activity with a point source discharge that is subject to regulation under the KPDES program.

Grab Sample is a single portion of effluent taken in an instant when all constituents of an effluent have an equal chance of inclusion.

High Quality Water means a surface water not listed as an outstanding state resource water, an exceptional water or as an impaired water.

Impaired Water means a surface water that is not fully supporting its designated uses.

Instantaneous means a measurement taken at the time of sampling.

Monthly Average is the sum of all discharge values measured during a calendar month, divided by the number of discharges measured during that month. When only one sample is taken during a calendar month, the monthly average is equivalent to the daily maximum.

Nutrients mean phosphorus and nitrogen.

New Facilities are facilities that do not have an active KPDES individual or general permit on the effective date of this permit.

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Outstanding State Resource Water is generally a unique water of the Commonwealth. The term may include waters that are part of a relatively undisturbed watershed that can provide basic scientific data and possess outstanding water quality characteristics; waters that support a diverse or unique native aquatic flora or fauna; waters that provide exceptional aesthetic or ecological value; waters that are part of a unique geological or historical area; or waters that possess physical or chemical characteristics that provide an unusual aquatic habitat within a physiographic region. The term automatically includes waters identified under the Kentucky Wild Rivers Act, the Kentucky Nature Preserves Act, the Federal Wild and Scenic Rivers Act and waters that support endangered or threatened species.

Surface Water means waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the Commonwealth.

Total Maximum Daily Load is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and is an allocation of that amount to the source of the pollutant.

Turbidity is the presence of suspended particulates, including sand, silt, clay, finely divided organic or inorganic matter, plankton or other microscopic organisms, or elements that optically interfere with the clarity of liquid.

Warm Water Aquatic Habitat means a surface water and associated substrate capable of supporting indigenous warm water aquatic life.

Water Treatment Plant is that portion of the water supply system that is designed to alter either the physical, chemical or bacteriological quality of the water before entry into the water distribution system.

f. Area of Coverage

The Commonwealth of Kentucky.

g. Eligible Discharges

Pursuant to authority in KRS 224, this permit is applicable to all necessary discharges created as a result of drinking water production from water treatment plants that use conventional treatment. These discharges are referred to herein as "filter backwash water, clarifier or sedimentation basin wastewater and wash water."

h. Limitations on Coverage

This permit does not authorize discharges from:

1. Facilities discharging directly into a surface water designated as a Cold Water Aquatic Habitat (CAH) or as an Outstanding State Resource Water (OSRW) as listed in 401 KAR 10:026, Section 5.
2. Facilities discharging directly into a surface water categorized as an Outstanding National Resource Water (ONRW) or as an Exceptional Water (EW) as listed in 401 KAR 10:030, Section 1.
3. Facilities discharging within five miles and upstream of an existing drinking water intake.
4. Facilities discharging directly into a surface water listed in the most recent Integrated Report to Congress on Water Quality in Kentucky (303(d) and 305(b) report) as impaired for turbidity or impaired for silt/sediment and for which an approved Total Maximum Daily Load (TMDL) has been developed.
5. Facilities that the Division of Water determines have a discharge that is more appropriately addressed by an individual permit.

Surface water designations and categorizations are available at:
<http://www.lrc.state.ky.us/kar/title401.htm>

The 303(d) and the 305(b) Integrated Reports are available at:
<http://www.water.ky.gov/sw/tmdl/303d.htm> and
<http://www.water.ky.gov/sw/swmonitor/305b.htm>

Those TMDLs approved by EPA are available at:
<http://www.water.ky.gov/sw/tmdl/approved+tmdls.htm>

i. Permitting Action

Reissuance of a KPDES general permit for discharges from water treatment plants that use conventional treatment.

j. Receiving Waters

This permit authorizes discharges to waters that are:

1. Classified as Warmwater Aquatic Habitat, Primary/Secondary Contact Recreation and Domestic Water Supply as listed in 401 KAR 10:026, Section 5.
2. Categorized as Impaired, if the impairment is not for turbidity, or categorized as Impaired if the impairment is not for silt/sediment with an approved Total Maximum Daily Load.
3. Categorized as High Quality as listed in 401 KAR 10:030, Section 1, provided the discharge complies with the additional controls as specified in this general permit for new facilities or expanding facilities.

2. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Filter backwash water, clarifier or sedimentation basin wastewater and wash water.

Effluent Characteristics	Reported Discharge		Proposed Limits		Applicable Water Quality Criteria and/or Effluent Guidelines
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(3)
Total Suspended Solids (mg/l)	Variable	Variable	30	50	401 KAR 5:080, Section 2(3)
Total Residual Chlorine (mg/l)	Variable	Variable	0.011	0.019	401 KAR 10:031, Section 4(k)
Total Recoverable Aluminum (mg/l)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(3)
Total Recoverable Iron (mg/l)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(3)
Total Phosphorus (mg/l) <u>1/</u>	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(3)
Total Phosphorus (mg/l) <u>2/</u>	Variable	Variable	1.0	2.0	401 KAR 5:080, Section 2(3)
pH (standard units)	Variable	Variable	6.0	9.0	401 KAR 10:031, Section 4

The data in the Reported Discharge columns varies depending on the quality of the intake water, the frequency of backwashing, treatment options and other variables.

Monitoring for total Recoverable Aluminum is only required if aluminum-based coagulants are used.

Monitoring for Total Recoverable Iron is only required if iron-based coagulants are used.

1/ Monitoring for Total Phosphorus is only required if phosphates are used in the distribution system.

2/ Total Phosphorus limitations apply only to facilities discharging directly into a surface water impaired for nutrients.

3. METHODOLOGY USED IN DETERMINING LIMITATIONS

a. Description of Discharge

Filter backwash water, clarifier or sedimentation basin wastewater and wash water.

b. Effluent Characteristics

The primary pollutant of concern in WTP discharges is typically suspended solids. WTP discharges also have the potential to contain chlorine, aluminum, iron and phosphorus. In addition to flow rate and pH, these pollutants are included in this general permit.

c. Pertinent Factors

General permits are appropriate when the wastewater characteristics of an industry as a whole are similar and can be addressed by a single set of permit conditions. Discharges from WTPs that use something other than conventional treatment, such as Reverse Osmosis, were not considered during limitation development and are therefore not eligible for coverage under this general permit.

Discharges that contain contaminated storm water or process wastewater not related to drinking water production were also not considered during limitation development. These types of wastewater may introduce pollutants not addressed by this general permit and are therefore not eligible for coverage under this general permit.

Discharges from WTPs are not a point source category addressed by Title 40 of the Code of Federal Regulations (40 CFR) for which the Environmental Protection Agency (EPA) has developed effluent guidelines and standards.

The previous version of this general permit states, "upon issuance of a new general permit, the permittee will have coverage automatically renewed. A new NOI or other notification is not necessary." However, because of significant changes to the new permit and the need for additional information, a new NOI will be required from all facilities, new or existing, in order to obtain coverage under this general permit.

d. Monitoring Requirements

Flow shall be monitored once per month instantaneously.

Total Suspended Solids, Total Residual Chlorine and pH shall be monitored once per month by grab sample.

If required, Total Recoverable Aluminum or Total Recoverable Iron shall be monitored once per month by grab sample.

If required, Total Phosphorous shall be monitored once per month by grab sample. Total Phosphorous shall be monitored once per week by grab sample for discharges directly into the Ohio River.

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow, Total Recoverable Aluminum and Total Recoverable Iron

The monitoring requirements for these parameters are consistent with the requirements of 40 CFR 122.43 as incorporated by reference in 401 KAR 5:065, Section 2(3).

Total Suspended Solids

The limits for this parameter are consistent with the requirements of 40 CFR 125.3(c)(2) as incorporated by reference in 401 KAR 5:080, Section 2(3). The limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Conventional Pollutant Control Technology" (BCT) requirements for these pollutants. The EPA Guidance Document, "Interim BPCTA For Municipal and Industrial Water Treatment Plants" was used in establishing these BPJ limitations.

Total Residual Chlorine and pH

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 4.

Total Phosphorus

There is the potential for this parameter to be present in WTP discharges. Because of the state of hypoxia that exists within portions of the Gulf of Mexico, the Environmental Protection Agency (EPA) is concerned with the discharge of this pollutant upstream from the mouth of the Mississippi River. The monitoring requirements for this parameter are consistent with the requirements of 40 CFR 122.43 as incorporated by reference 401 KAR 5:065, Section 2(3). The limits for this parameter are consistent with the requirements of 40 CFR 125.3(c)(2) as incorporated by reference in 401 KAR 5:080, Section 2(3). The limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Conventional Pollutant Control Technology" (BCT) requirements for these pollutants.

4. PERMIT APPLICATION REQUIREMENTS

a. NOI Submittal Required

Upon issuance of this general permit, a new Notice of Intent (NOI) will be required for all existing facilities with either permitted or unpermitted discharges. After issuance of this general permit, a new NOI is required for any new facilities proposing to discharge.

The owner or operator of a facility that requires coverage under this general permit shall submit Form NOI-WTP and a United States Geological Survey (USGS) 7.5-minute quadrangle topographic map, or copy, with the facility and discharge location(s) clearly marked. Form NOI-WTP requires the following (see form for details):

- Permittee Information
- General Facility Information
- Discharge Description
- Discharge Monitoring Report (DMR) Information
- Certification

b. NOI Submittal Deadlines

An application for an existing discharge presently covered under the expired general permit must be received by the Division of Water within thirty (30) days of the effective date of this permit.

An application for a new discharge must be received by the Division of Water at least one hundred and eighty (180) days before the proposed discharge is due to commence.

c. Where to Submit an NOI

Completed NOI forms should be sent to the address below:

Kentucky Division of Water
Surface Water Permits Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

If, based upon the review of the NOI the Division of Water determines that additional controls or requirements beyond those contained in this general permit are necessary to protect water quality, then the applicant shall be required to obtain an individual permit.

5. **AUTHORIZATION TO DISCHARGE**

The permittee is authorized to discharge under the terms and conditions of this general permit upon written notification of coverage by the Division of Water. Until then, facilities with coverage under the expired general permit may continue to operate under the terms and conditions of that permit.

6. **ANTIDEGRADATION**

In the decision rendered by the United States Court of Appeals for the Sixth Circuit in Kentucky Waterways Alliance, et al. v. Johnson, et al., the court remanded to EPA its approval of certain sections of Kentucky's Antidegradation Policy Implementation Methodology as codified in 401 KAR 10:030.

The Energy and Environment Cabinet (EEC) has recently revised 401 KAR 10:030 to establish new procedures for the implementation of antidegradation requirements in general permits. In lieu of performing an alternatives analysis and socioeconomic demonstration, the new procedure enables the Division of Water, acting on the behalf of EEC, to establish additional analyses, control measures, or other conditions to satisfy antidegradation requirements.

The new procedures require the Division of Water to describe in the Fact Sheet how the general permit complies with the antidegradation requirements and to notify the public of facilities granted coverage under the general permit via the Division of Water web page. The public notification shall include the facility name, location and receiving water.

In regards to antidegradation and the lowering of water quality, WTPs are not a net contributor of pollutants to water resources. Because they remove pollutants from source water and increase the quality to drinking water standards, WTP discharges do not contain a greater volume of pollutants than were originally present in the source water.

Accordingly, discharges from the facilities potentially covered by this permit are inherently different from a discharge of process water from a typical industrial facility. However, when these pollutants are collected over time from large volumes of water and are then discharged through small volumes of finished water, the concentration of a pollutant can increase.

Therefore, for new facilities or expanding facilities discharging to High Quality Waters (waters otherwise requiring an antidegradation review), the Division of Water has determined to include within this general permit, additional protective measures such that compliance with these measures results in no significant degradation in the receiving water due to the permitted activity.

These additional protective measures include:

a. Additional Analysis

The permittee shall assure that the discharge does not cause a permanent increase in the long-term average of the total suspended solids concentration of the receiving stream. This requirement applies whether the WTP withdraws water from the same stream receiving the discharge, or whether the WTP withdraws water from another source. The facility may use existing data or perform monitoring and analysis to demonstrate compliance with this requirement.

b. Control Measures

The permittee shall take measures to prevent WTP discharges from containing any residual chlorine by dechlorinating all wastewater prior to discharge. This permit does not stipulate the method of dechlorination. However, if chemical means of dechlorination are used, it is important to observe proper dosing. Significant overdosing must be avoided because excess sulfite can react with oxygen to form sulfates, reducing dissolved oxygen levels in the receiving stream.

The permittee shall take measures to prevent WTP discharges from mobilizing and carrying sediment into surface waters through soil erosion. This requirement applies to areas beyond the monitoring location. The type of erosion control measures used should be based on site-specific conditions and may include the use of energy dissipation devices or rock lined discharge channels.

c. Other Conditions

The permittee shall, to the extent possible, minimize the frequency, volume and duration of discharge. This requirement may address water conservation, intake water quality or excluding storm water from entering into the wastewater treatment system.

The permittee shall perform visual inspections of all wastewater treatment components on a daily basis. This requirement is to prevent untreated or insufficiently treated effluent from reaching a surface water. Typical inspections should include an examination of all pipes, valves, pumps, basins, ponds, tanks, equipment, supports and foundations.

In addition, coverage under this permit is not available for discharges to waters impaired for turbidity, or impaired for sedimentation/siltation with an approved Total Maximum Daily Load.

These requirements clarify the Division of Water's expectation of facilities to meet all applicable antidegradation requirements. The goal of these requirements is to prevent any lowering of water quality of waters of the Commonwealth categorized as High Quality.

If, based upon the review of the NOI the Division of Water determines that additional controls or requirements beyond those contained in this general permit are necessary to meet antidegradation requirements, then the applicant shall be required to obtain an individual permit.

The conditions of 401 KAR 10:029, Section 1 has been satisfied by this permit action. Existing facilities that received coverage under previous versions of this permit and are not expanding are not subject to antidegradation implementation procedures. For new facilities or expanding facilities, this reissued general permit is consistent with the requirements of 401 KAR 10:030, Section 1.

7. **PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS**

The permittee shall comply with the effluent limitations by the effective date of the permit.

8. **PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE**

Pursuant to 401 KAR 5:065, Section 2(10), a BMP requirement shall be included: to control or abate the discharge of pollutants from ancillary areas containing toxic or hazardous substances or those substances which could result in an environmental emergency; where numeric effluent limitations are infeasible; or to carry out the purposes and intent of KRS 224.

9. **PROCESS CHANGES**

Discharges authorized by this permit shall remain consistent with those described on the approved NOI. Any significant changes to the facility or modifications to the treatment process that change the chemical or physical properties of the wastewater discharge must be reported to the Division of Water by way of submitting an updated NOI-WTP form. After reviewing the updated NOI, the Division of Water may require the permittee to submit an application for an individual permit.

10. **PERMIT TRANSFERS**

When the owner or operator of a facility covered under this permit changes, the new owner or operator must submit a Change of Ownership form at least 48 hours before the change to transfer coverage under this general permit. Coverage cannot be transferred from a facility at one physical location to a facility at another physical location.

11. **PERMIT TERMINATIONS**

In the event of an elimination of all wastewater discharges authorized by this permit, the owner or operator must submit a Notice of Termination (Form NOT-WTP) in order to terminate coverage under this permit and nullify its requirements.

12. **PERMIT DURATION**

Five (5) years. This general permit expires on the date indicated on the signature page. However, coverage under an expired general permit continues in effect until the Division of Water issues a new general permit.

13. **PERMIT INFORMATION**

The application, draft permit and fact sheet, public notice, comments received and additional information are available by writing the Division of Water at 200 Fair Oaks Lane, Frankfort, Kentucky 40601.

14. **REFERENCES AND CITED DOCUMENTS**

All material and documents referenced or cited in this fact sheet are parts of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the person listed below.

15. **CONTACT INFORMATION**

For further information, contact the individual identified on the Public Notice or the Permit Writer - Ronnie Thompson at (502) 564-8158, extension 4896 or e-mail Ronnie.Thompson@ky.gov.

16. **PUBLIC NOTICE INFORMATION**

Please refer to the attached Public Notice for details regarding the procedures for a final permit decision, deadline for comments, and other information required by 401 KAR 5:075, Section 4(2)(e).

KPDES



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

PERMIT NO.: KYG640000
AI NO.: 35050

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

Any municipal, private, state or federally owned Water Treatment Plant using conventional treatment

is authorized to discharge from a facility located

Within one of the 120 counties of the Commonwealth of Kentucky

to receiving waters named

Any of the eligible Waters of the Commonwealth that comprise the Mississippi and Ohio River basins and sub-basins, within the political and geographical boundaries of Kentucky.

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in PARTS I, II, III, IV and V hereof. The permit consists of this cover sheet, PART I 2 pages, PART II 2 pages, PART III 2 pages, PART IV 2 pages and PART V 3 pages.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Date Signed

Sandra L. Gruzesky, Director
Division of Water

PART I - GENERAL INFORMATION

A. Selected Definitions

Cold Water Aquatic Habitat means a surface water and associated substrate that are able to support indigenous aquatic life or self-sustaining or reproducing trout populations on a year-round basis.

Conventional Treatment means raw water treatment consisting of coagulation, flocculation, sedimentation, gravity filtration and disinfection.

Daily Maximum is the highest of the discharge values measured on any one day during a calendar month. When only one sample is taken during a calendar month, the daily maximum is equivalent to the monthly average.

Exceptional Water is generally a unique water of the Commonwealth. The term may include waters that contain a fish community that is rated as "excellent" by the Index of Biotic Integrity; waters that contain a macroinvertebrate community that is rated as "excellent" by the Macroinvertebrate Bioassessment Index; or waters that are in the Cabinet's reference reach network. The term automatically includes those waters identified as an Outstanding State Resource Water.

Existing Facilities are facilities that are already discharging on the effective date of this permit.

Expanded Facilities are facilities that increase pollutant loading to the stream or increase their design capacity over levels approved prior to the effective date of this general permit.

Facility means an activity with a point source discharge that is subject to regulation under the KPDES program.

Grab Sample is a single portion of effluent taken in an instant when all constituents of an effluent have an equal chance of inclusion.

High Quality Water means a surface water not listed as an outstanding state resource water, an exceptional water or as an impaired water.

Impaired Water means a surface water that is not fully supporting its designated uses.

Instantaneous means a measurement taken at the time of sampling.

Monthly Average is the sum of all discharge values measured during a calendar month, divided by the number of discharges measured during that month. When only one sample is taken during a calendar month, the monthly average is equivalent to the daily maximum.

Nutrients mean phosphorus and nitrogen.

New Facilities are facilities that do not have an active KPDES individual or general permit on the effective date of this permit.

Outstanding State Resource Water is generally a unique water of the Commonwealth. The term may include waters that are part of a relatively undisturbed watershed that can provide basic scientific data and possess outstanding water quality characteristics; waters that support a diverse or unique native aquatic flora or fauna; waters that provide exceptional aesthetic or ecological value; waters that are part of a unique geological or historical area; or waters that possess physical or chemical characteristics that provide an unusual aquatic habitat within a physiographic region. The term automatically includes waters identified under the Kentucky Wild Rivers Act, the Kentucky Nature Preserves Act, the Federal Wild and Scenic Rivers Act and waters that support endangered or threatened species.

Surface Water means waters having well-defined banks and beds, either constantly or intermittently flowing; lakes and impounded waters; marshes and wetlands; and any subterranean waters flowing in well-defined channels and having a demonstrable hydrologic connection with the surface. Lagoons used for waste treatment and effluent ditches that are situated on property owned, leased, or under valid easement by a permitted discharger are not considered to be surface waters of the Commonwealth.

Total Maximum Daily Load is a calculation of the maximum amount of a pollutant that a water body can receive and still meet water quality standards, and is an allocation of that amount to the source of the pollutant.

Turbidity is the presence of suspended particulates, including sand, silt, clay, finely divided organic or inorganic matter, plankton or other microscopic organisms, or elements that optically interfere with the clarity of liquid.

Warm Water Aquatic Habitat means a surface water and associated substrate capable of supporting indigenous warm water aquatic life.

Water Treatment Plant is that portion of the water supply system that is designed to alter either the physical, chemical or bacteriological quality of the water before entry into the water distribution system.

B. Eligible Discharges

Pursuant to authority in KRS 224, this permit is applicable to all necessary discharges created as a result of drinking water production from water treatment plants that use conventional treatment. These discharges are referred to herein as filter backwash water, clarifier or sedimentation basin wastewater and wash water.

C. Limitations on Coverage

This permit does not authorize discharges from:

1. Facilities discharging directly into a surface water designated as a Cold Water Aquatic Habitat (CAH) or as an Outstanding State Resource Water (OSRW) as listed in 401 KAR 10:026, Section 5.
2. Facilities discharging directly into a surface water categorized as an Outstanding National Resource Water (ONRW) or as an Exceptional Water (EW) as listed in 401 KAR 10:030, Section 1.
3. Facilities discharging within five miles and upstream of an existing drinking water intake.
4. Facilities discharging directly into a surface water listed in the most recent Integrated Report to Congress on Water Quality in Kentucky (303(d) and 305(b) report) as impaired for turbidity or impaired for silt/sediment and for which an approved Total Maximum Daily Load (TMDL) has been developed.
5. Facilities that the Division of Water determines have a discharge that is more appropriately addressed by an individual permit.

D. Permitting Action

Reissuance of a KPDES general permit for discharges from water treatment plants that use conventional treatment.

PART II A - EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge filter backwash water, clarifier or sedimentation basin wastewater and wash water from any outfall identified on the NOI.

Such discharges shall be limited and monitored by the permittee as specified below:

<u>EFFLUENT CHARACTERISTICS</u>	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	(lbs/day)		Other Units (Specify)		Measurement Frequency	Sample Type
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.		
Flow (MGD)	Report	Report	N/A	N/A	1/Month	Instantaneous
Total Suspended Solids	N/A	N/A	30 mg/l	50 mg/l	1/Month	Grab
Total Residual Chlorine	N/A	N/A	0.011 mg/l	0.019 mg/l	1/Month	Grab
TR Aluminum (mg/l) (see Note 1)	N/A	N/A	Report	Report	1/Month	Grab
TR Iron (mg/l) (see Note 2)	N/A	N/A	Report	Report	1/Month	Grab
Total Phosphorus (see Note 3)						
(see Note 4)	N/A	N/A	Report	Report	1/Month	Grab
(see Note 5, then 4)	N/A	N/A	1.0 mg/l	2.0 mg/l	1/Month	Grab
pH (standard units)	N/A	N/A	6.0 (min)	9.0 (max)	1/Month	Grab

The abbreviation N/A means Not Applicable. The abbreviation TR means Total Recoverable.

There shall be no discharge of floating solids or visible foam or sheen in other than trace amounts.

Samples shall be taken at the nearest accessible point prior to discharge or to mixing with the receiving waters or waste streams from other outfalls.

Samples and measurements shall be representative of the volume and nature of the monitored discharge. Grab samples shall be a single effluent portion collected at the period most representative of the total discharge.

Notes:

- 1 Monitoring for Total Recoverable Aluminum is only required if aluminum-based coagulants are used.
- 2 Monitoring for Total Recoverable Iron is only required if iron-based coagulants are used.
- 3 Monitoring for Total Phosphorus is only required if phosphates are used in the distribution system.
- 4 Increase measurement frequency to 1/Week for facilities discharging directly into the Ohio River.
- 5 Limitations apply only to facilities discharging directly into a surface water impaired for nutrients.

PART II B - ADDITIONAL ANALYSIS, CONTROL MEASURES AND OTHER CONDITIONS

The following requirements apply only to new facilities or expanding facilities discharging directly into a surface water categorized as a High Quality Water.

A. Additional Analysis

The permittee shall assure that the discharge does not cause a permanent increase in the long-term average of the total suspended solids concentration of the receiving stream. This requirement applies whether the WTP withdraws water from the same stream receiving the discharge, or whether the WTP withdraws water from another source. The facility may use existing data or perform monitoring and analysis to demonstrate compliance with this requirement. This requirement is in addition to the Total Suspended Solids monitoring that must be performed by all facilities.

B. Control Measures

The permittee shall take measures to prevent WTP discharges from containing any residual chlorine by dechlorinating all wastewater prior to discharge. This permit does not stipulate the method of dechlorination. However, if chemical means of dechlorination are used, it is important to observe proper dosing. Significant overdosing must be avoided because excess sulfite can react with oxygen to form sulfates, reducing dissolved oxygen levels in the receiving stream. This requirement is in addition to the Total Residual Chlorine monitoring that must be performed by all facilities.

The permittee shall take measures to prevent WTP discharges from mobilizing and carrying sediment into surface waters through soil erosion. This requirement applies to areas beyond the monitoring location. The type of erosion control measures used should be based on site-specific conditions and may include the use of energy dissipation devices or rock lined discharge channels.

C. Other Conditions

The permittee shall, to the extent possible, minimize the frequency, volume and duration of discharge. This requirement may address water conservation, intake water quality or excluding storm water from entering into the wastewater treatment system.

The permittee shall perform visual inspections of all wastewater treatment components on a daily basis. This requirement is to prevent untreated or insufficiently treated effluent from reaching a surface water. Typical inspections should include an examination of all pipes, valves, pumps, basins, ponds, tanks, equipment, supports and foundations.

The implementation of these requirements shall be documented by the permittee in the facility's Best Management Practices plan and are in addition to standard Best Management Practices that apply to all facilities.

(See PART V, SECTION B. SPECIFIC CONDITIONS, 2. New or Expanding Discharges to a High Quality Water)

PART III - PERMIT APPLICATION REQUIREMENTS

The owner or operator of a facility that requires coverage under this general permit shall submit Form NOI-WTP and a United States Geological Survey (USGS) 7.5-minute quadrangle topographic map, or copy, with the facility and discharge location(s) clearly marked.

A. NOI Content

Form NOI-WTP requires the following information:

SECTION I - PERMITTEE INFORMATION

Applicant Name
Mailing address
City, State, Zip Code
Contact Name
Contact Phone Number

SECTION II - GENERAL FACILITY INFORMATION

WTP Name
Physical Address
City, State, Zip Code
County
WTP Latitude
WTP Longitude
Design Capacity
Average Production
WTP Raw Water Intake Source
Permitted Withdrawal Volume
WTP Type
Raw Water Additives
Finished Water Additives

SECTION III - DISCHARGE DESCRIPTION

Wastewater Type
Wastewater Flow Rate
Number of Outfalls
Outfall Latitude
Outfall Longitude
Wastewater Treatment
Receiving Water Body
Nearest downstream public water supply
Distance to nearest downstream public water supply
Stream Segment Use Designation
Stream Segment Antidegradation Categorization

SECTION IV - DISCHARGE MONITORING REPORT (DMR) INFORMATION

Mailing Name
Mailing Address
City, State, Zip Code
DMR Contact Name
Contact Phone Number

SECTION V - CERTIFICATION

The NOI contains a statement certifying the information provided is correct and accurate. Following the certification statement is a signature block for the authorized agent, including the agent's name, official title, telephone number and date.

ATTACHMENT

The NOI contains a requirement to attach a USGS 7.5-minute quadrangle map or copy with the site and the discharge location(s) clearly marked.

B. NOI Submittal Deadlines

An application for an existing discharge presently covered under the expired general permit must be received by the Division of Water within thirty (30) days of the effective date of this permit.

An application for a new discharge must be received by the Division of Water at least one hundred and eighty (180) days before the proposed discharge is due to commence.

C. Where to Submit an NOI

Completed NOI forms should be sent to the address below:

Kentucky Division of Water
Surface Water Permits Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

If, based upon the review of the NOI the Division of Water determines that additional controls or requirements beyond those contained in this general permit are necessary to protect water quality, then the applicant shall be required to obtain an individual permit.

PART IV - OTHER REQUIREMENTS

A. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported on a preprinted Discharge Monitoring Report (DMR) Form that will be mailed to you. The completed DMR for each monitoring period must be sent to the Division of Water at the address listed below (with a copy to the appropriate Regional Office) postmarked no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

Energy and Environment Cabinet
Department for Environmental Protection
Division of Water/Surface Water Permits Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

A list of Division of Water Regional Offices and the counties that they serve is included as Attachment A.

If the permittee monitors any pollutant more frequently than required by this permit, then the permittee must include the results of that monitoring in the calculation and reporting of any data submitted to the Division of Water on the DMRs.

B. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under 401 KAR 5:050 through 5:086, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

C. Schedule of Compliance

The permittee shall achieve compliance with all the requirements of this general permit upon written notification of coverage by the Division of Water.

E. Standard Conditions

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

The permittee is also advised that all KPDES permit conditions in KPDES Regulation 401 KAR 5:065, Section 1 will apply to all discharges authorized by this permit.

F. Process Changes

Discharges authorized by this permit shall remain consistent with the approved NOI. Any significant changes to the facility or modifications to the treatment process that change the chemical or physical properties of the wastewater discharge must be reported to the Division of Water by way of submitting an updated NOI-WTP form. After reviewing the updated NOI, the Division of Water may require the permittee to submit an application for an individual permit.

G. Permit Transfers

When the owner or operator of a facility covered under this permit changes, the new owner or operator must submit a Change of Ownership form at least 48 hours before the change to transfer coverage under this general permit. Coverage cannot be transferred from a facility at one physical location to a facility at another physical location.

H. Permit Terminations

In the event of an elimination of all wastewater discharges authorized by this permit, the owner or operator must submit a Notice of Termination (Form NOT-WTP) in order to terminate coverage under this permit and nullify its requirements.

PART V - BEST MANAGEMENT PRACTICES

SECTION A. GENERAL CONDITIONS

1. Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

2. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 5:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

3. Implementation

The plan shall be developed and submitted to the Division of Water within 90 days of the written notification of coverage under this general permit. Implementation shall be within 180 days of that submission. Modifications to the plan as a result of ineffectiveness or operational changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

4. General Requirements

The BMP plan shall:

- a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.
- b. Establish specific objectives for the control of toxic and hazardous pollutants.
 - (1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.
 - (2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.

- c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."
- d. Include any special conditions established in Section B.
- e. Be reviewed by plant engineering staff and the plant manager.

5. Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

- a. BMP Committee
- b. Reporting of BMP Incidents
- c. Risk Identification and Assessment
- d. Employee Training
- e. Inspections and Records
- f. Preventive Maintenance
- g. Good Housekeeping
- h. Materials Compatibility
- i. Security
- j. Materials Inventory

6. SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

7. Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

8. Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to NREPC personnel. Initial copies and modifications thereof shall be sent to the following addresses (with a copy to the appropriate Regional Office) when required by Section 3:

Energy and Environment Cabinet
Department for Environmental Protection
Division of Water/Surface Water Permits Branch
200 Fair Oaks Lane
Frankfort, Kentucky 40601

A list of Division of Water Regional Offices and the counties that they serve is included as Attachment A.

9. BMP Plan Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility that materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

10. Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.

SECTION B. SPECIFIC CONDITIONS

1. Periodically Discharged Wastewaters Not Specifically Covered By Effluent Conditions

The permittee shall include in this BMP plan procedures and controls necessary for the handling of periodically discharged wastewaters such as intake screen backwash, meter calibration, fire protection, hydrostatic testing water, line flushing, etc.

2. New or Expanding Discharges to a High Quality Water

The following requirement applies only to new facilities or expanding facilities discharging directly into a surface water categorized as a High Quality Water:

The permittee shall include documentation in this BMP plan demonstrating the implementation of the requirements of PART II B - ADDITIONAL ANALYSIS, CONTROL MEASURES AND OTHER REQUIREMENTS.

<p>Bowling Green Regional Office 1508 Westen Avenue Bowling Green, Kentucky 42104 (270) 746-7475</p> <p>Allen Edmonson Logan Simpson Barren Grayson Ohio Warren Butler Hart</p>	<p>London Regional Office 875 South Main Street London, Kentucky 40741 (606) 330-2080</p> <p>Bell Jackson Leslie Rockcastle Clay Knox McCreary Whitley Harlan Laurel Owsley</p>
<p>Columbia Regional Office 2751 Campbellsville Road Columbia, Kentucky 42728 (270) 384-4734</p> <p>Adair Green Metcalfe Russell Boyle Larue Monroe Taylor Casey Lincoln Nelson Washington Clinton Marion Pulaski Wayne Cumberland</p>	<p>Louisville Regional Office 9116 Leesgate Road Louisville, Kentucky 40222-5084 (502) 429-7122</p> <p>Breckinridge Hardin Meade Shelby Bullitt Jefferson Oldham Spencer</p>
<p>Florence Regional Office 8020 Veterans Memorial Drive, Suite 110 Florence, Kentucky 41042 (859) 525-4923</p> <p>Boone Carroll Henry Pendleton Bracken Gallatin Kenton Trimble Campbell Grant Owen</p>	<p>Madisonville Regional Office Madisonville State Office Building 625 Hospital Drive Madisonville, Kentucky 42431-1683 (270) 824-7529</p> <p>Caldwell Daviess Hopkins Todd Christian Hancock McLean Union Crittenden Henderson Muhlenberg Webster</p>
<p>Frankfort Regional Office 643 Teton Trail, Suite B Frankfort, Kentucky 40601 (502) 564-3358</p> <p>Anderson Franklin Madison Powell Bourbon Garrard Mercer Robertson Clark Harrison Montgomery Scott Estill Jessamine Nicholas Woodford Fayette</p>	<p>Morehead Regional Office 525 Hecks Plaza Drive Morehead, Kentucky 40351 (606) 783-8655</p> <p>Bath Elliott Lawrence Menifee Boyd Fleming Lewis Morgan Carter Greenup Mason Rowan</p>
<p>Hazard Regional Office 233 Birch Street, Suite 1 Hazard, Kentucky 41701 (606) 435-6022</p> <p>Breathitt Knott Magoffin Pike Floyd Lee Martin Wolfe Johnson Letcher Perry</p>	<p>Paducah Regional Office 130 Eagle Nest Drive Paducah, Kentucky 42003 (270) 898-8468</p> <p>Ballard Fulton Livingston McCracken Calloway Graves Lyon Trigg Carlisle Hickman Marshall</p>